

METHOD OF GROWING ORIENTED CALCIUM FLUORIDE SINGLE CRYSTALS

Abstract

A method of making an oriented calcium fluoride single crystal includes loading calcium fluoride feedstock on top of a seed crystal having a specific crystallographic orientation, heating the calcium fluoride feedstock to a temperature sufficient to form a melt, and growing a calcium fluoride crystal on the seed crystal by progressively moving the melt and the seed crystal through a temperature gradient zone having an axial temperature gradient in a range from approximately 2°C/cm to approximately 8°C/cm, wherein a growth direction of the calcium fluoride crystal substantially conforms to the crystallographic orientation of the seed crystal.

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